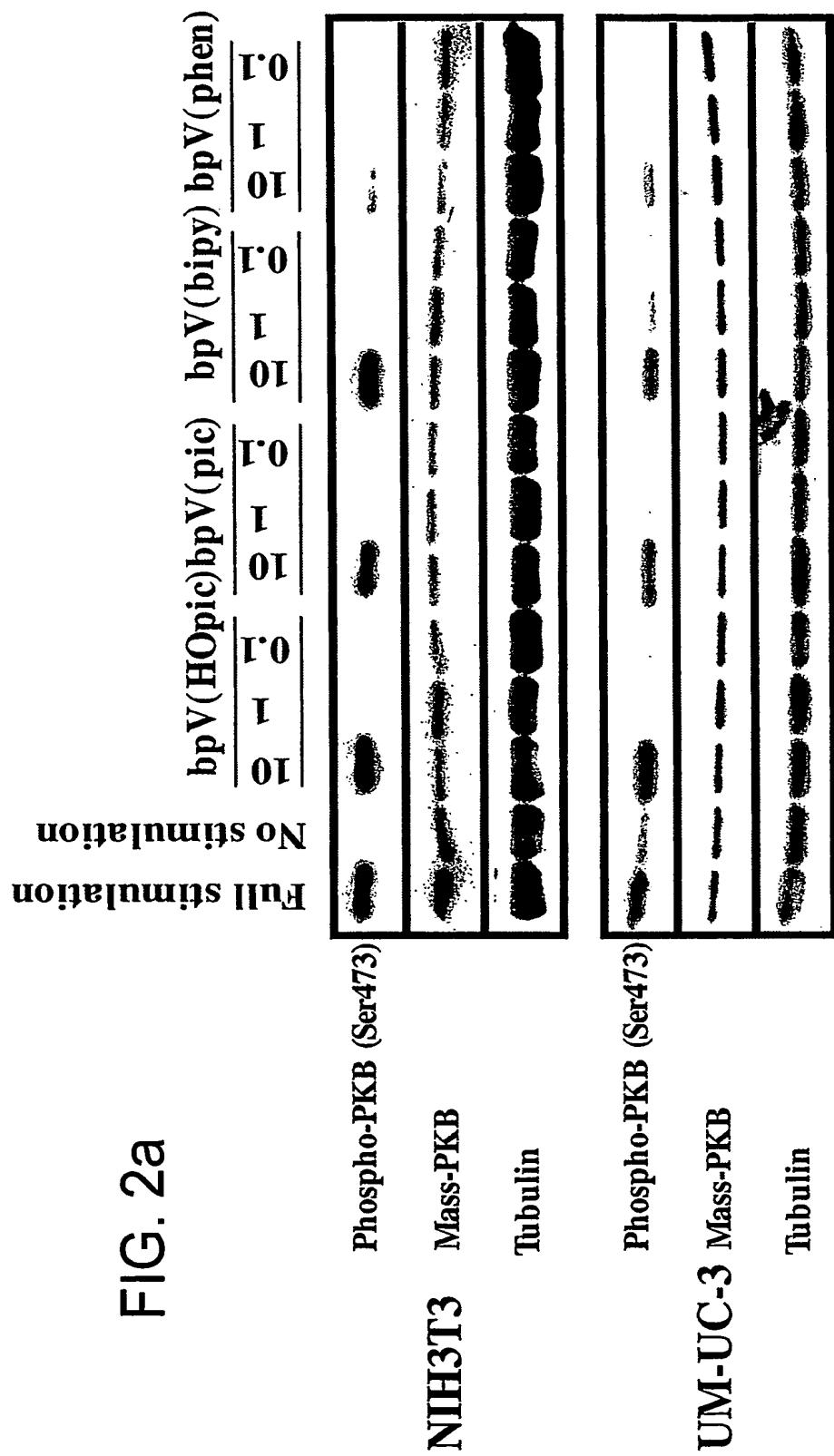
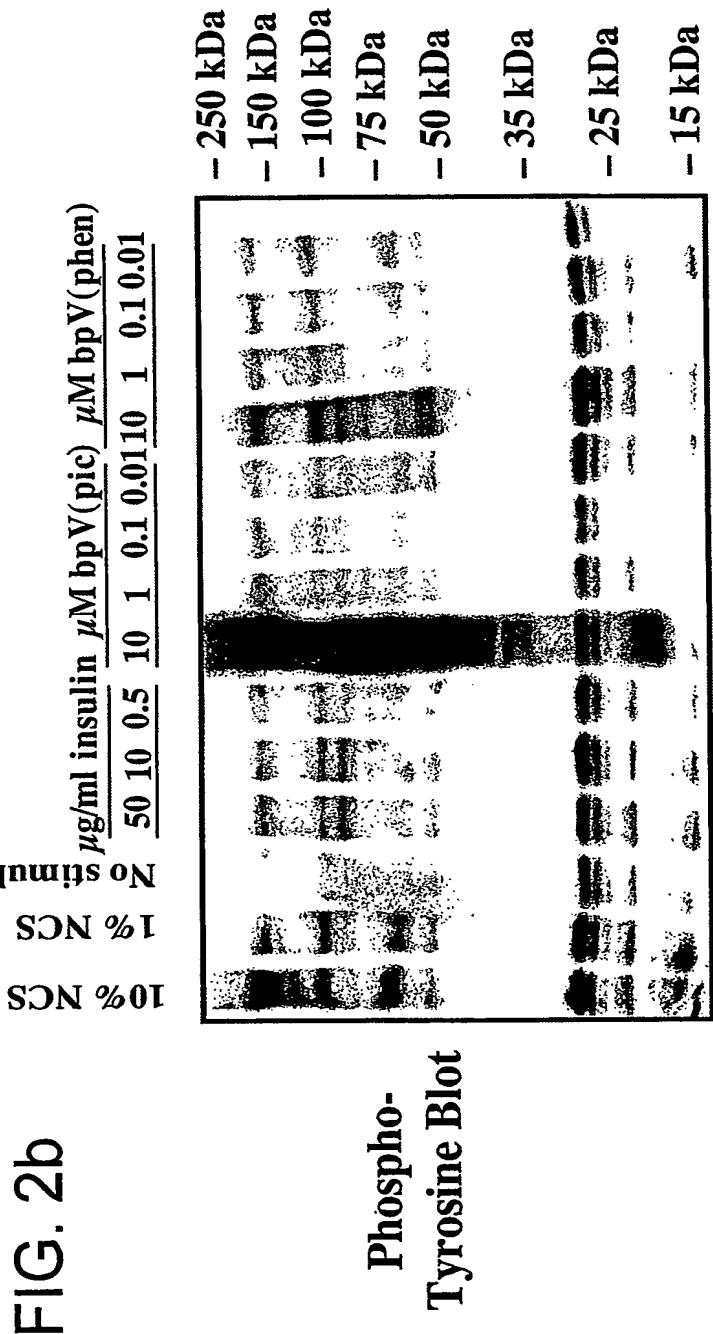


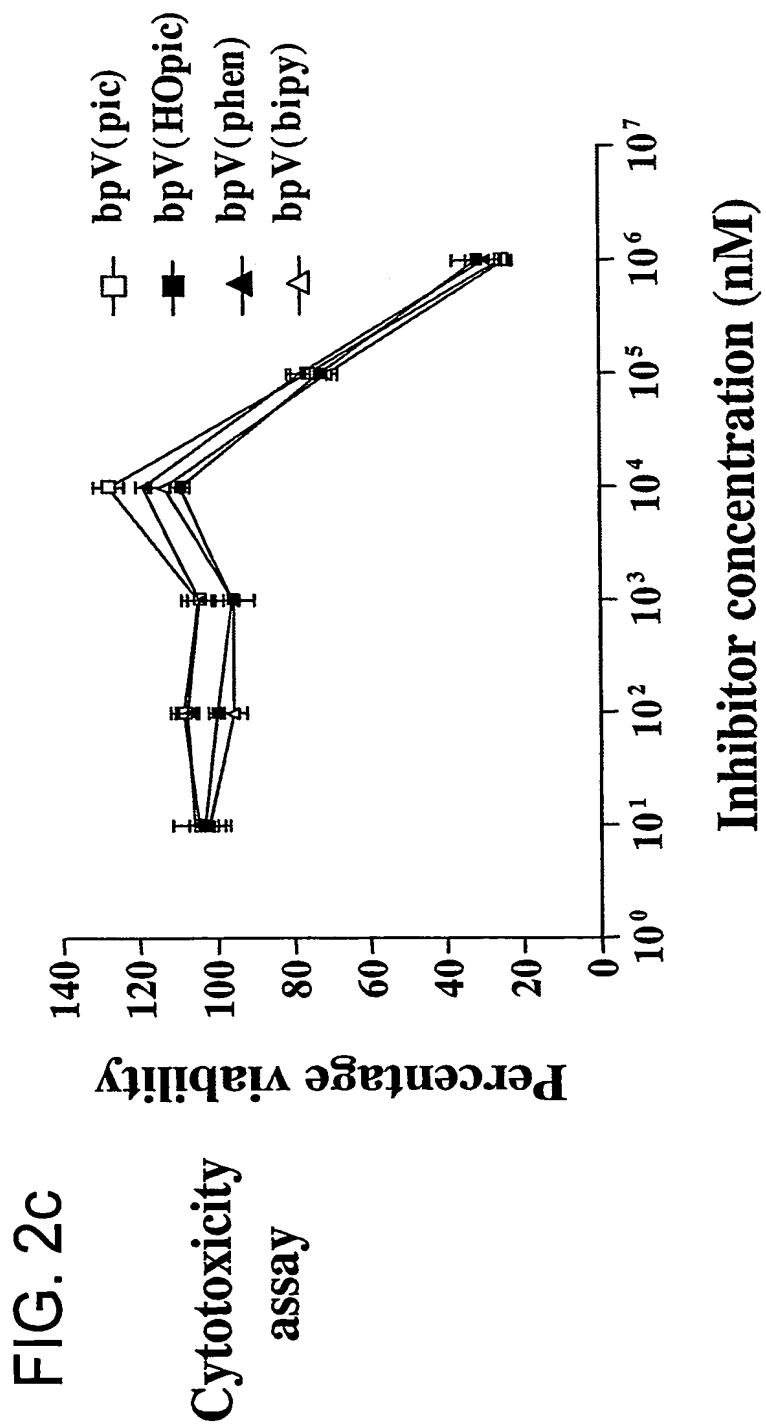
FIG. 1 IC₅₀ values

| | Aromatic bpVs | | Polar bpVs | |
|---------------------|--------------------|--------------------|--------------------|--------------------|
| inhibitor enzyme | bpV (bipy) | bpV (phen) | bpV (HOPic) | bpV (pic) |
| PTP-β | 60.3 nM +/- 9.6 | 343 nM +/- 88.5 | 4.9 μM +/- 0.9 | 12.7 μM +/- 3.2 |
| PTP-1B | 164 nM +/- 22.6 | 920 nM +/- 45.2 | 25.3 μM +/- 2.9 | 61 μM +/- 10.5 |
| PTEN | 18 nM +/- 0.8 | 38 nM +/- 2.4 | 14 nM +/- 2.3 | 31 nM +/- 1.7 |





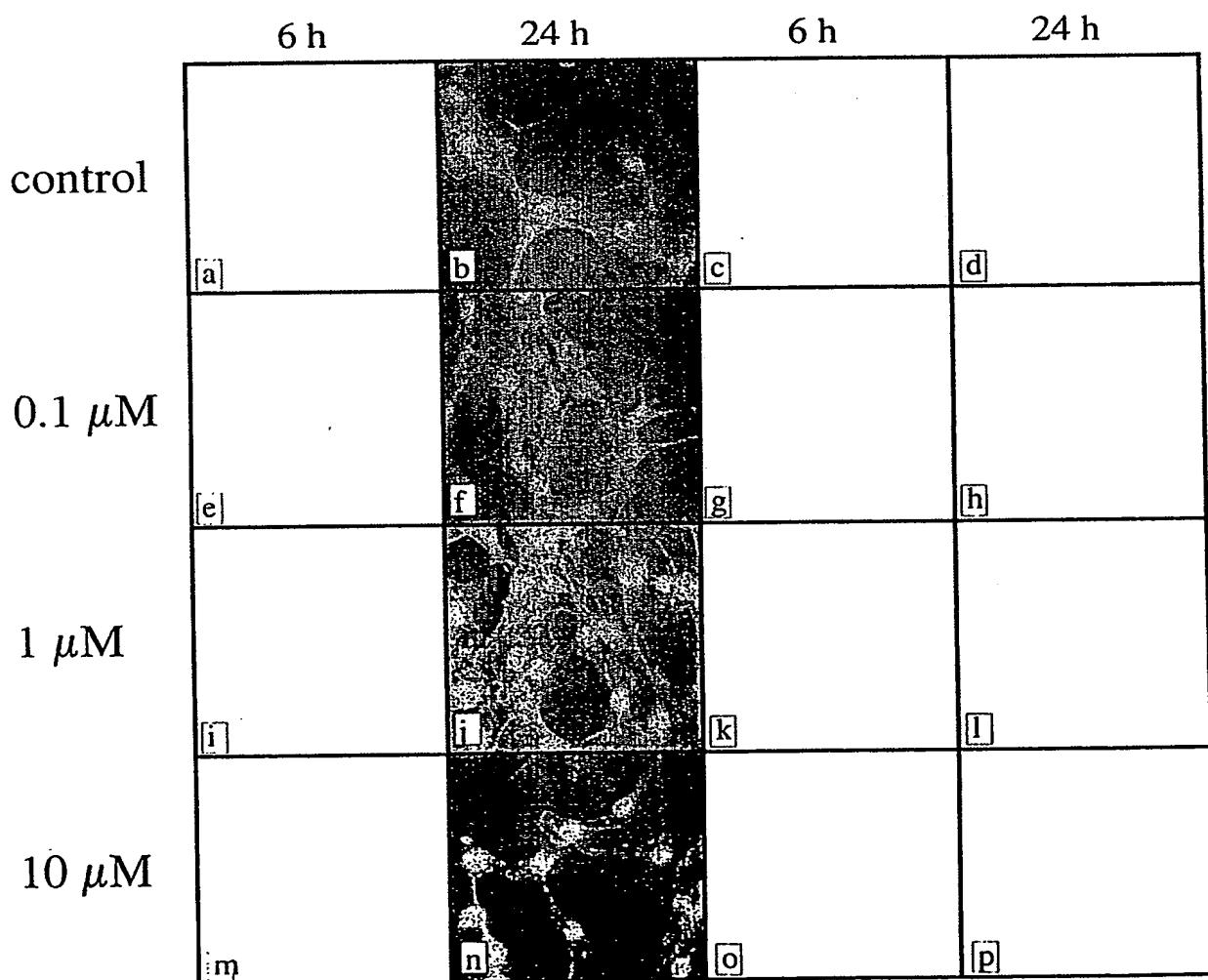
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FIG. 3

| | | | | |
|--|----------|------|-----------|------|
| | bpV(pic) | | bpV(phen) | |
| | 6 h | 24 h | 6 h | 24 h |



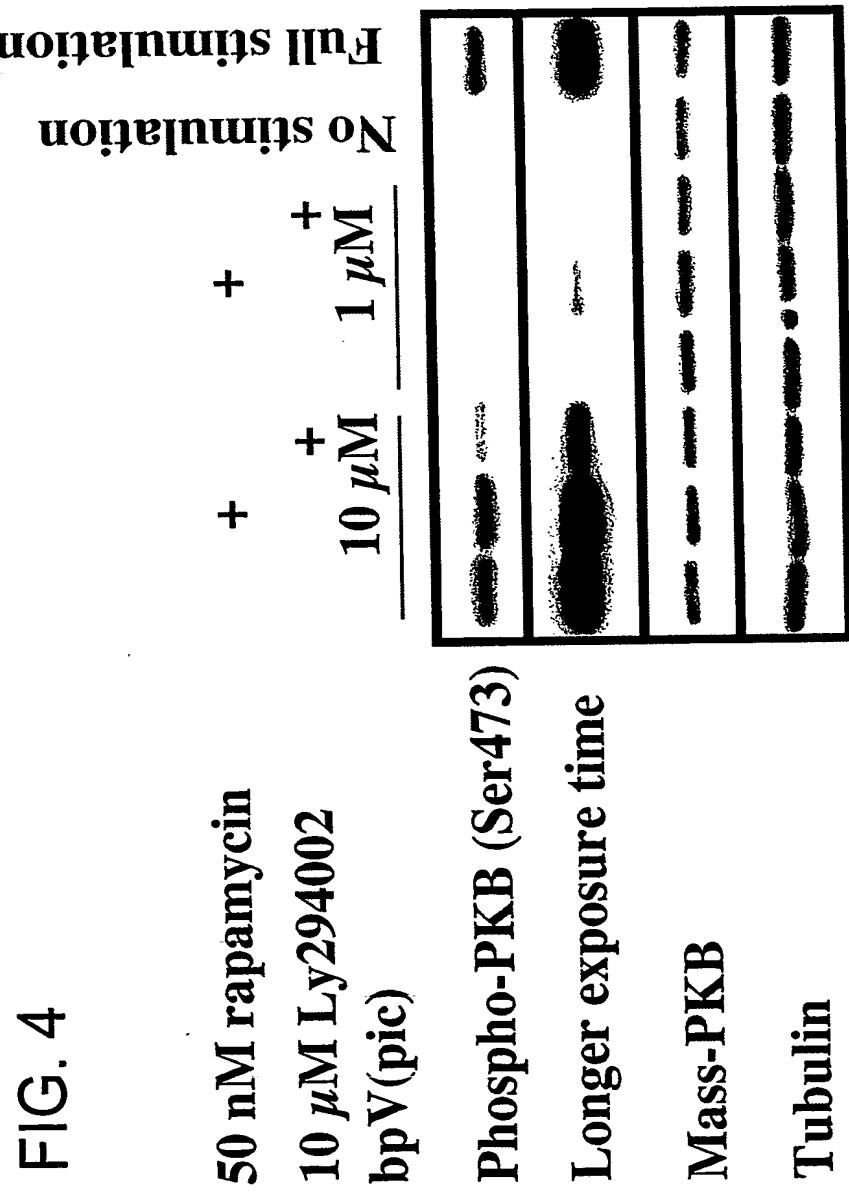


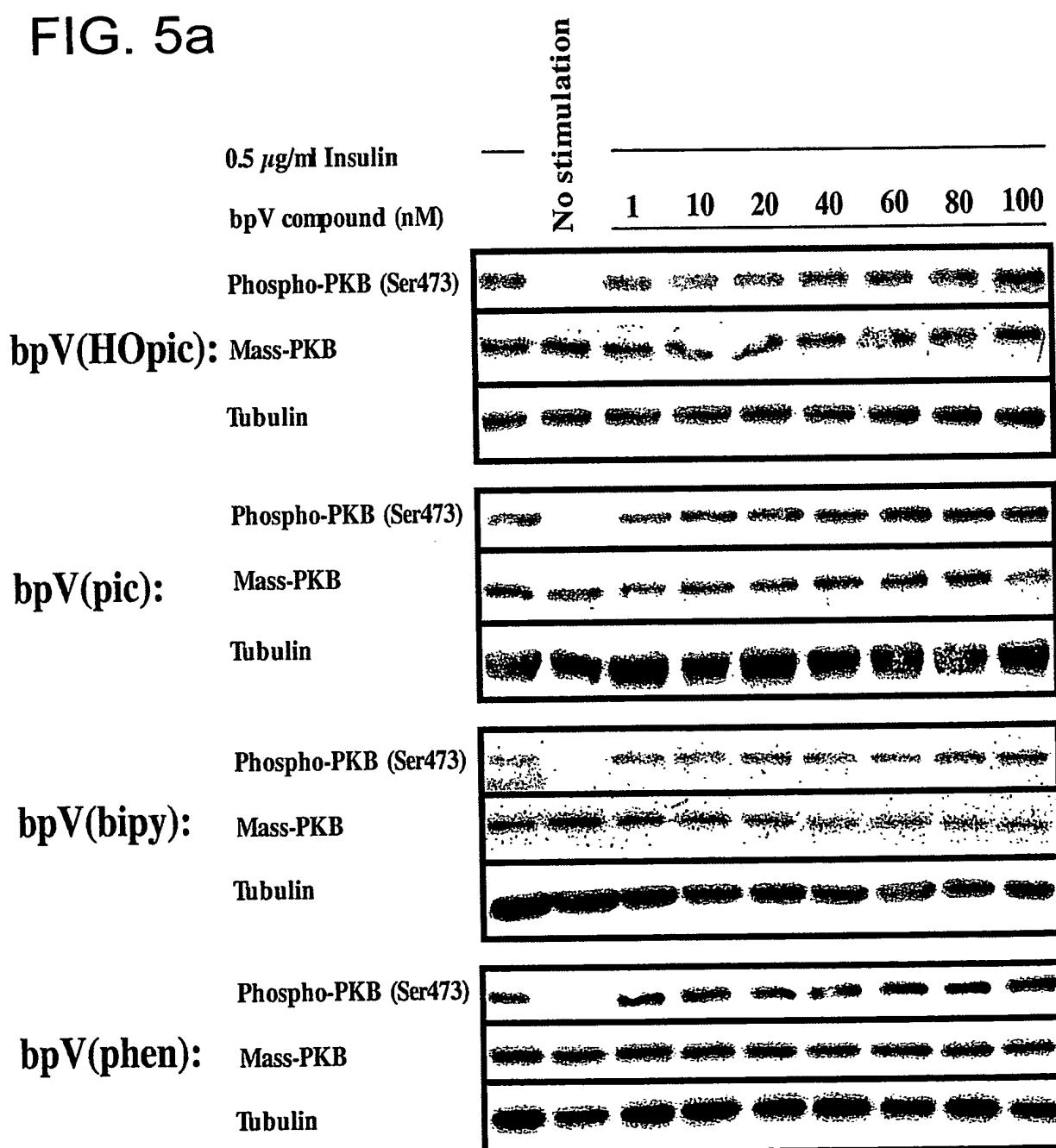
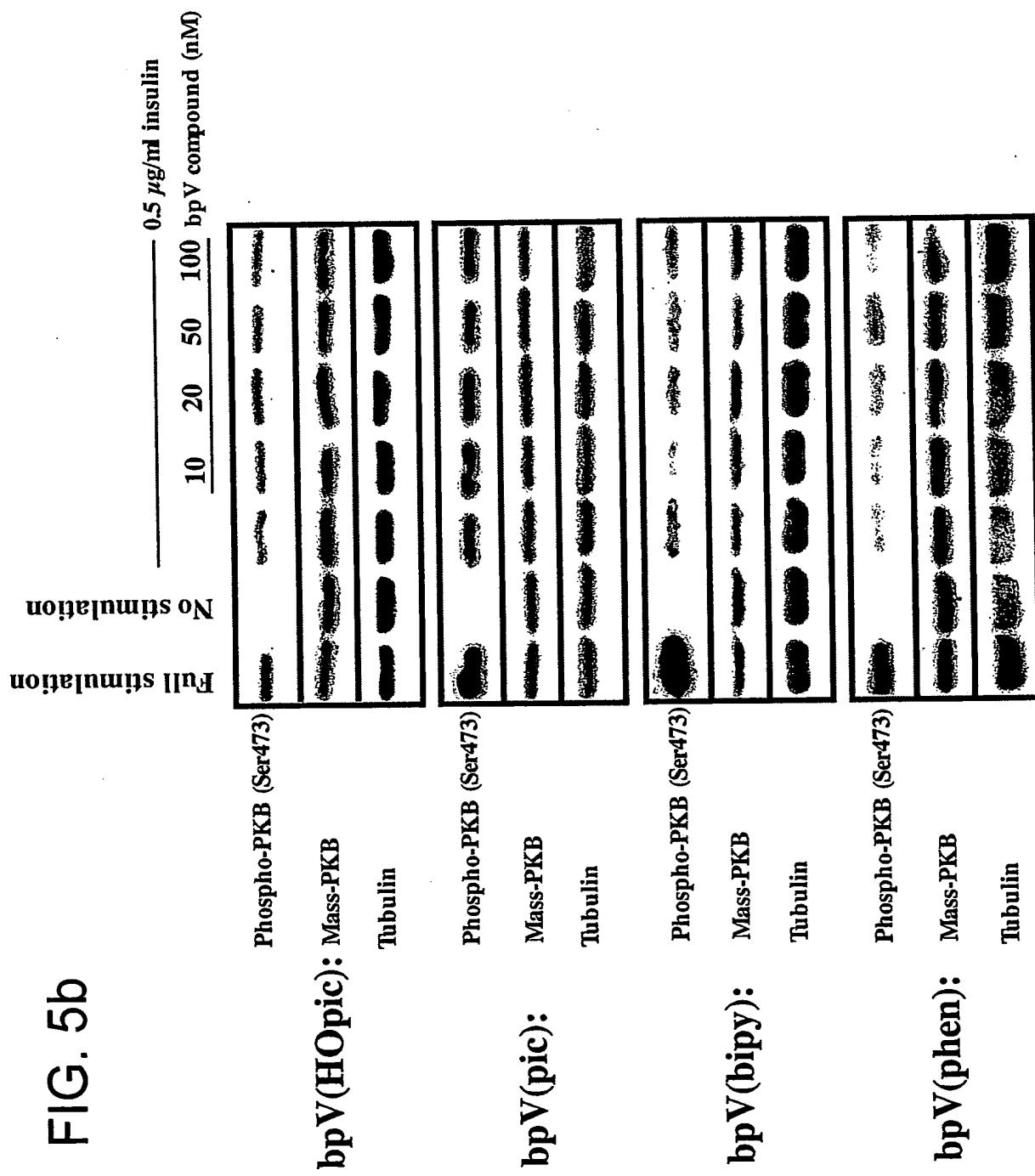
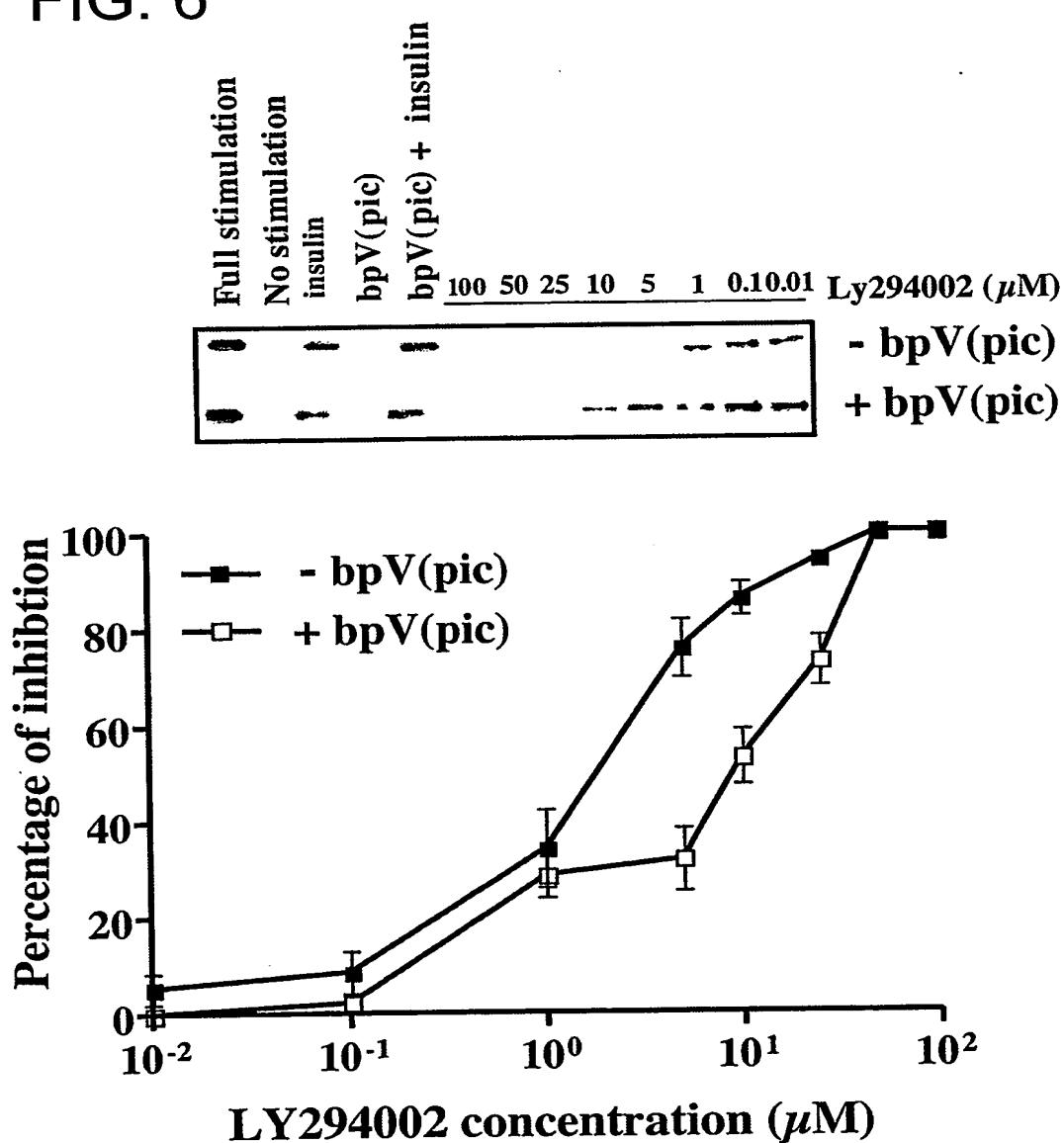
FIG. 5a

FIG. 5b

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FIG. 6



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FIG. 7

| property | inhibitor class | polar inhibitors | aromatic inhibitors |
|-----------------------|----------------------|---------------------------------|---------------------------------|
| Cytotoxicity | MTT actin | high μ molar μ molar | high μ molar μ molar |
| Insulin mimetic | pSer473(PKB) pTyr | μ molar μ molar | μ molar μ molar |
| PTP inhibition | <i>in vitro</i> | high nanomolar | |
| PTEN inhibition | <i>in vitro</i> | low nanomolar | low nanomolar |
| rapamycin (PKB) | <i>in vivo</i> | nanomolar | nanomolar |
| Inhibitor sensitivity | | stimulates phosphorylation | inhibits phosphorylation |
| Ly294002 (pTyr) | | | |